Claims

1. Process for providing a flow of particulate matter to a reactor, comprising intermittently adding said particulate matter and a diluent to a mixing tank, and continuously withdrawing a slurry of particulate matter in diluent from the mixing tank for introduction into the reactor,

wherein prior to each addition of particulate matter and diluent to the mixing tank, the concentration of particulate matter in the diluent already in the mixing tank is measured or calculated, and the amount of particulate matter and diluent subsequently added is measured so as to achieve the same concentration at the end of the addition as that measured or calculated prior to the addition.

2. Process according to claim 1, wherein the particulate matter is a catalyst, preferably a polymerisation catalyst.

3. Process according to claim 1 or 2, wherein measurement of the amount of particulate matter and diluent added to the mixing tank is carried out before any diluent is added to the particulate matter.

4. Process according to any preceding claim, wherein diluent and particulate matter are added to the mixing tank separately.

5. Process according to any of claims 1 to 3, wherein some or all of the diluent is used to flush the measured amount of particulate matter into the mixing tank.

6. Process according to any preceding claim, wherein the concentration of particulate matter in the diluent is calculated using measurements of the volume or mass of diluent in the mixing tank, and the mass of particulate matter added to the mixing tank.

7. Process according to any preceding claim, wherein the particulate matter is first measured into a feed pot, which is subsequently emptied into the mixing tank.

8. Process according to claim 7, wherein the amount of particulate matter measured into the feed pot is determined by weighing the vessel from which the particulate matter is discharged.

9. Process according to any preceding claim, further comprising means for measuring the mass flow of particulate matter and diluent out of the mixing tank to the reactor.

10. Process according to any preceding claim where catalyst and/or diluent addition to the slurry tank is continuous.

11. Process according to any preceding claim, for controlling the mass flow of catalyst to a polymerization reactor.

12. Process according to claim 12, wherein the mass flow of catalyst to a continuous polymerization reactor varies by less than 10%, preferably less than 5%, during filling of the mixing tank.